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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,802	02/06/2004	Jongik Won	373722002110	8467
25226	7590	05/15/2006	EXAMINER	
MORRISON & FOERSTER LLP			TRAN, BINH X	
755 PAGE MILL RD			ART UNIT	
PALO ALTO, CA 94304-1018			PAPER NUMBER	

1765

DATE MAILED: 05/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/773,802	<b>Applicant(s)</b> WON ET AL.	
	<b>Examiner</b> Binh X. Tran	<b>Art Unit</b> 1765	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 02 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 8-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,5 and 7 is/are rejected.
- 7) ☒ Claim(s) 2,4 and 6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/19/04</u> | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of Group I (claims 1-7) in the reply filed on 03-02-2006 is acknowledged.
2. Claims 8-10 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 03-02-2006.

### ***Specification***

3. The disclosure is objected to because of the following informalities: The page 1 paragraph [0001] of the specification, the examiner suggests applicants to update the current status of US Patent Serial No. 09/902,960, filed July 10, 2001 by inserting --, now US Patent 6,690,025--.

Appropriate correction is required.

### ***Claim Objections***

4. Claim 4 is objected to because of the following informalities: In claim 4, "the mask of load structures mask" (emphasis added) appears to have incorrect grammar. The examiner suggests replacing "the mask of the load structure mask" to --the mask of the load structure--. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 depends on claim 1. In claim 1, applicants disclose a core material being on "a bottom cladding" layer. In claim 5, applicants further disclose the step of depositing "cladding" after etching. It is unclear from the claim, whether the term "cladding" is referred to the previous cladding layer (i.e. "bottom cladding layer"), or the term "cladding" is referred to a new cladding layer such as upper cladding.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1, 3, 5, 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ono (US 6,553,164) in view Chandross et al. (US 6,003,823).

Respect to claim 1, Ono discloses a method for manufacturing a planar waveguide, the method comprising the step of:

forming a mask (39) of optical waveguides defining at least on optical waveguide on a core material (35), the core material being on a bottom cladding (33) (col. 7);

forming a mask (37) (read on mask of the load structure) defining at least one etch load pattern on the core material (35) (See Fig 3D-4A).

Ono further discloses the mask (37) and the mask of optical waveguide (39) complete cover the surface area of the core material (35) (i.e. 100 %, See Fig 3D, read on "at least approximately 25% of a surface area of the core material).

Ono fails to disclose the waveguide is a part of the planar light wave circuit. In a method for forming a waveguide, Chandross discloses a planar light-wave circuit (PLC) having a cladding layer (22), core layer (33) and pattern mask. It would have been obvious to one having ordinary skill in the art, at the time of invention, modify Ono in view of Chandross by having a waveguides are planar light-wave circuit because this structure is a typical of the PLC.

Respect to claim 3, Ono teaches to etch the core material (35) not masked by the optical waveguide mask the load mask (See Fig 3C to Fig 4C; col. 7 lines 31-50).

Respect to claim 5, Ono discloses the step of depositing an upper cladding (33b) after the etching step (col. 7 lines 45-50). Respect to claim 7, Ono discloses the load

structure (41) has a profile similar to a profile of the pattern of optical waveguides (43) (See Fig 4C).

***Allowable Subject Matter***

10. Claims 2, 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. Claim 4 would be allowable if rewritten to overcome the objection, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

12. The following is a statement of reasons for the indication of allowable subject matter: The cited prior arts fail to disclose either one of the following steps in conjunction with all other limitation in the claims: wherein the mask of optical waveguides and the mask of load structures are formed simultaneously; wherein the mask of optical waveguides is separated from the mask of the load structures by at least 50  $\mu\text{m}$ ; or wherein the load structure mask forms the etch load pattern having at least two load structures which intersect one another.

***Conclusion***

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Binh X. Tran whose telephone number is (571) 272-1469. The examiner can normally be reached on Monday-Thursday and every other Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on (571) 272-1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Binh Tran

Binh X. Tran